



## Talking Cup

### You will need:

Paper/plastic cup, scissors, toothpick, string/yarn, water, paper towel.

### What to do:

1. Take the cup and put a hole in the bottom with sharp scissors.
2. Use scissors to cut about 30cm of string and thread it through the hole in the cup.
3. Take the end of the string that is through the inside of the cup and tie it to a toothpick.
4. Pull the end of the string that is sticking out from the bottom of the cup until the toothpick catches on the cup. Give the string a couple of short but firm tugs to make sure everything is secure.
5. Fold a paper towel into quarters and use water to wet the towel. Pinch the string with the wet towel and slide the towel down the length of the string.

### Take it further:

Try making alterations to your apparatus to bring out different voices. Try: Using yarn instead of string, using a larger or smaller cup, using longer or shorter lengths of string. What do your changes do to the cup's voice?

### The Science:

Sound is transmitted through the air by vibrations. As your fingers slide across the string, vibrations occur in the string. The wet paper towel makes the string stickier and increases the “stick and slide” effect. The vibrations caused by the “sticking and sliding” cause the cup to vibrate, which results in the amplification of sound.

